

REMARKS

Amendments

Claim 1 has been amended to incorporate limitations from originally presented claim 11. Claim 11 has therefore been cancelled in favor of claim 1. Claims 24-30 have been cancelled to expedite prosecution.

New claims 31-34 are presented that describe specific encapsulation materials and configurations. Specifically Claim 31 relates to food products wherein the encapsulation material comprises a methyl cellulose material, and claim 32 relates to food products wherein the encapsulation material comprises a hydroxy propyl methyl cellulose material. Antecedent basis for these claims is located, for example, at page 11, lines 15-16. Claim 33 relates to food products 1 wherein the microorganisms are provided in a freeze dried culture that is formed into a tablet with a hydroxy propyl methyl cellulose material. Antecedent basis for this claim is located, for example, at page 28, lines 15-16. Claim 34 relates to food products wherein the microorganisms are provided in a freeze dried culture that is placed within a sachet formed from a hydroxy propyl methyl cellulose material. Antecedent basis for this claim is located, for example, at page 28, lines 16-17.

New claims 35 and 36 are presented that describe additional specific encapsulation materials. New claim 35 describes a food product wherein the encapsulation material dissolves prior to the food product reaching a temperature state above 10° C., or in other words prior to any temperature abuse of the product. Antecedent basis for this claim is located, for example, at page 10, lines 9-11. New claim 36 describes a food product wherein the encapsulation material forms a gel that keeps the microorganisms from dispersing when the food product is at temperature below 10° C., and wherein the gel releases the microorganisms when the food product reaches a temperature above about 10° C. Antecedent basis for this claim is located, for example, at page 11, lines 17-22.

Non-Statutory Double Patenting

Claims 24-30 have been rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-23 of US Patent No. 6,692,779.

Claims 24-30 have been cancelled, thereby obviating this rejection.

Claim Rejections Under 35 U.S.C. §102

Claims 1-4 and 6-23 have been rejected under 35 U.S.C. §102 (b) as being anticipated by Hutkins.

The present invention relates to a food product comprising a pasteurized hydrated, edible food item. The claims as amended provide that the food product is at a temperature state of less than 10° C, and comprises encapsulated, dormant, hydrated nontoxic microorganisms that are effectively dormant up to temperatures of about 10 ° C., and wherein, if the food product reaches a temperature above 10 ° C., the nontoxic microorganisms release by-products into the food product that inhibit the growth of harmful microorganisms.

Hutkins, in contrast, discloses a food product that contains bacteriocin-producing bacteria that produces the bacteriocin under all conditions, including at refrigeration temperatures. The bacteria are expressly required to be active at temperatures of 1°-7 ° C. See column 4, lines 60-63. Hutkins does not disclose providing encapsulated microorganisms.

Because Hutkins fails to describe food products that comprises encapsulated, dormant, hydrated nontoxic microorganisms that are effectively dormant up to temperatures of about 10 ° C., Hutkins does not anticipate the present claims as amended.

Claim Rejections Under 35 U.S.C. §103

Claim 5 has been rejected under 35 US.C. §103(a) as being unpatentable over Hutkins in view of Gaier.

As noted above, the instant claims as amended provide a food product that is at a temperature state of less than 10° C, and comprises encapsulated, dormant, hydrated nontoxic microorganisms that are effectively dormant up to temperatures of about 10 ° C., and wherein, if the food product reaches a temperature above 10 ° C., the nontoxic microorganisms release by-products into the food product that inhibit the growth of harmful microorganisms. Because the microorganisms are encapsulated, the hydration of the cultures is slowed and the microorganism are better protected from inactivation by heat processing during packaging operations. See page 6, lines 3-20. In one embodiment, the encapsulation material dissolves prior to any temperature abuse of the product. See page 10, lines 9-11. In other embodiments, the encapsulation material forms a gel that keeps the microorganisms from dispersing until exposure to temperature above about 10° C, at which point the gel releases the microorganisms. See page 11, lines 17-22.

Hutkins, in contrast, discloses a food product that contains bacteriocin-producing bacteria that produces the bacteriocin under all conditions, including at refrigeration temperatures. The bacteria are expressly required to be active at temperatures of 1°-7 ° C. See column 4, lines 60-63. The skilled artisan would not have a reason to modify the Hutkins bacteria to be dormant, because this modification would destroy one of the fundamental objectives of this reference.

Further, Hutkins does not disclose providing the bacteria in encapsulated form. Similarly, the skilled artisan would not have a reason to modify the Hutkins bacteria to be dormant, because encapsulating the bacteria would inhibit production of bacteriocin under certain conditions, which again would destroy one of the fundamental objectives of this reference to have active bacteria at temperatures of storage.

It is respectfully submitted that none of the pending claims are rendered obvious by the Hutkins disclosure.

Gaier does not bridge the gap between Hutkins and the present claims. Gaier is cited for the teaching of use of *Streptococcus thermophilus* as a lactic bacteria in preparation of fermented food products. The Gaier process is very different from the present use of microorganisms, because Gaier uses the microorganisms to produce the

food product, and would have no reason to desire a dormant stage or to encapsulate the microorganism.

It is therefore respectfully submitted that even in combination, the Hutkins and Gaier disclosures fall short of the claims as amended that are limited to a food product that is at a temperature state of less than 10° C, and comprises encapsulated, dormant, hydrated nontoxic microorganisms that are effectively dormant up to temperatures of about 10 ° C., and wherein, if the food product reaches a temperature above 10 ° C., the nontoxic microorganisms release by-products into the food product that inhibit the growth of harmful microorganisms.

CONCLUSION

In view of the above remarks, it is respectfully submitted that the claims and the present application are now in condition for allowance. Approval of the application and allowance of the claims is earnestly solicited. In the event that a phone conference between the Examiner and the Applicant's undersigned attorney would help resolve any remaining issues in the application, the Examiner is invited to contact said attorney at (651) 351-2900.

Respectfully Submitted,

DAVID J. DOMINGUES, ET AL.

By:

Dated September 14, 2007


Dale A. Bjorkman, #33,084
Kagan Binder, PLLC
Suite 200, Maple Island Building
221 Main Street North
Stillwater, MN 55082
Phone: 651-351-2900
Facsimile: 651-351-2954